REMARKS

Applicants note that the drawings are accepted and the claim of priority is acknowledged.

Applicants respectfully traverse the rejection of all of the claims under Section 103(a) as obvious in view of various combinations of prior art detailed below.

All the Section 103(a) rejections are based on combinations of prior art that include U.S. Published Application No. 2002/0041390 to Mizuno et al. and U.S. Patent No. 5,207,327 to Hirayama. Claims 1-4, 6, 7, 9, 11, 12, and 16-18 are rejected on a combination of these two references alone.

To reject claims 5 and 10, the Examiner adds as a tertiary reference Hirayama U.S. Published Application 2002/0050996 relating to a pop-up erasing the display of an icon. The claim 8 rejection adds U.S. Patent No. 5,978,619 to Kato for a disclosure of a lamp switch that changes states in coordination with another change. Nishimura U.S. Patent No. 6,038,040 is added to reject claims 13 and 14. It is cited as teaching a warning message in the context of a copying machine. To reject claim 15 the Examiner adds Nishimura and Sadakuni U.S. Patent No. 6,385,412 (for its teaching of a warning sound).

Mizuno discloses a digital image-forming apparatus (a copy machine) with an external input device in the form of a liquid crystal video camera as well as external output device. The operation section of the camera is displayed on an operation panel 1 of the digital image-forming device. Figs. 6(A)-6(F) and 7(A)-7(E) are display screens in the operation panel 1 shown in Fig. 4. The Examiner cites paragraphs 0066, 0067 and 0070 discussing these screens and an interrupt key 15 (Fig. 4).

The Examiner admits that there is no change in the state of the interrupt key display correlated with changes in the display screens.

For changes in the interrupt key, the Examiner cites Hirayama '327. In rejecting claims 1, 16 and 17, the Examiner refers to Hirayama '327 at Col. 10, lines 56-59, and Fig. 5C. The Hirayama '327 interrupt key 66 is in dash line to show that it is disabled. At the end of page 3, top of page 4 of the Action, the Examiner says it would be obvious to use such a change of state of the interrupt key in the Mizuno apparatus.

Neither of these principal references addresses the fundamental problem solved by the present invention -- avoiding confusion of the operator when one operation is interrupted temporarily to run a second operation with a different associated display.

The discussion of the Mizuno interrupt key 15 at page 5, paragraph 0067 describes the interrupt key as allowing the apparatus to start the copying of a second document while it continues to operate to copy a first document. This is not the solution of the present invention where the interrupted operation halts, and is later resumed, leading to the possible confusing of displays associated with different operations. Mizuno discloses more of an "overlap" in successive copying operations to provide efficient utilization of the machine.

Similarly, the interrupt key 66 in Hirayama '327 stops an iterative neural network or "fuzzy logic" sequence of handwritten character entries and their comparison, or association, with a related block type character. Col. 9, last three lines, and the top of Col. 10 touching "interrupt" is described as stopping the process of writing the character in response to a displayed message instruction to "write characters one more time." At Col. 9, lines 35-47, the interrupt key is described as disabled to allow the character recognition process to run. Note also Figs. 6A and 6B where the interrupt key is presented as a way to stop the recognition process with a first display, not interrupt it to insert and run another process with a second associated display, and then return to the original recognition process and the first display.

Stated more generally, a trigger for changing a display state of the interruption key as claimed herein is different from that in Hirayama '327. In the present claimed

invention, during a normal operation, the display state of the interruption key 60 is such that it will accept an activating press-down. However, the display state of the interruption key is placed in a state that does not accept any press-down when it is detected that a detail-setting key is pressed down, and detail items of a job detail setting are accordingly displayed in a pop-up manner.

In contrast to the present invention, in Hirayama, during a normal operation, the display state of the interruption key is such that it does not accept any press-down. The display state of the interruption key is placed in a state to accept press-down only when it is possible to accept abortion of a process that is currently being carried out.

In summary, neither Mizuno nor Hirayama '327 carry out the same multiple functions performed by the present invention, nor do Mizuno or Hirayama '327 operate to interrupt one operation temporarily to run a second operation (with different related detail settings and displays), and then return to the original operation to complete it. In other words, while these references disclose an interrupt button, it is not one that operates in the same way as the presently claimed interrupt button, nor is the same technical problem present and solved.

Applicants do not find in these references any motivation or suggestion to use the Hirayama change of state in its interrupt key in the context of the Mizuno apparatus. In Mizuno, the key 15 allows one to begin setting up the parameters for a second copying job as a prior copying job completes its run. There is no indication that one ever goes back to the detail setting display of the first copying job after inputting settings for the second job. A straightforward application of Hirayama '327 would teach one to provide an interrupt button on a Mizuno device to stop the operation of the process then being carried out by the Mizuno device. This is directly opposite to the described operation of Mizuno, and the stated purpose of the Mizuno invention.

The rejections of claims 5, 8, 10, and 13-15 add tertiary references to show isolated features of dependent claims relating to ways that a user of an apparatus is

alerted to the state of a key, or some other change of state. However, none of these references address the interruption of a first job or operation of a multi-function ("plurality of jobs") apparatus to run a second, different job or operation, and later return to the first job or operation, all in coordination with some indication of this change of state with respect to a change of state of an interrupt key and/or a pop-up display associated with the selected job. Of these tertiary references, only Nishimura even mentions an interrupt function (auto interrupt key 109), and its operation does not correlate with changes in jobs and/or detail setting displays.

In view of these Remarks, Applicants urge that the prior art of record, alone or in any combination, does not render the claimed invention "obvious," and this application is clearly in condition for allowance.

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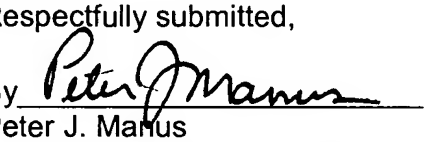
Respectfully submitted,

By 

Peter J. Manus
Registration No.: 26,766
EDWARDS ANGELL PALMER & DODGE LLP
P.O. Box 55874
Boston, Massachusetts 02205
(617) 439-4444
Attorneys/Agents For Applicant